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09/461,984	12/15/1999	JIN LU	PHA-23-890	4517

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PHILIPS INTELLECTUAL PROPERTY & STANDARDS
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EXAMINER

HOFFMAN, BRANDON S

ART UNIT	PAPER NUMBER
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2171

DATE MAILED: 08/11/2003

9

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/461,984

Applicant(s)

LU ET AL.

Examiner

Brandon Hoffman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on _____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☒ Claim(s) 1 and 17 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 7.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Specification

1. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

2. The abstract of the disclosure is objected to because of the use of implied terms. On lines 4 and 5, the sentence "...point of deployment (POD) module and a set-top box, are disclosed by an arrangement..." should read -- "...point of deployment (POD) module and a set-top box, by an arrangement..." --. Correction is required. See MPEP § 608.01(b).
3. The abstract of the disclosure is objected to because of its length. The abstract should be between 50 and 150 words. Correction is required. See MPEP § 608.01(b).
4. The abstract of the disclosure is objected to because of the extraneous word "the". The sentence "If the at least one control information pair..." on line 16 and 17 can be fixed by deleting --the-- from the sentence so it states, "If at least one control information pair...". Correction is required. See MPEP § 608.01(b).

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5. The disclosure is objected to because of the following informalities: On page 12 line 24, "temper" should read, --tamper--.

Appropriate correction is required.

Claim Objections

6. Claim 1 is objected to because of the following informalities: On line 10, the word "key" is missing after "...respectively generating a first". By adding --key-- to the sentence, claim 1 will not be objected to. Appropriate correction is required.

7. Claim 17 is objected to because of the following informalities: The dependent claim is claiming "The deployment module of claim 16..." of an independent claim that claims "A host device". Claim 17 should say, "The host device of claim 16...".

Appropriate correction is required.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eskicioglu (WO 9856179 A1) in view of OpenCable POD Copy Protection System, hereinafter referred to as IS-POD-CP, and further in view of International Telecommunication Union, hereinafter referred to as ITU-T.

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Regarding claim 1, Eskicioglu teaches a system (page 6, lines 1 and 22) for copy protecting information, the system comprising:

- A set-top box (figure 1, ref. Num 20 and page 6, line 2) including;
 - Wherein the set-top box transmits a request message for information (page 8, lines 20 and 21)
 - The point of deployment module generates a reply message (page 8, lines 24-26)
 - Respectively generating a first key in the point of deployment module (page 8, lines 25 and 26) and a second key in the set-top box (page 9, lines 17-21)
 - And the point of deployment module encrypting the information with the first shared key (page 7, lines 15-17)
 - And transmitting the encrypted information to the set-top box (page 3, lines 11-13)
 - And the set-top box decrypting the encrypted information with the second shared key (page 10, lines 25-28) when the first and second shared keys match (page 10, lines 15-24).

Eskicioglu does not teach the system comprising a point of deployment module.

He also does not teach the reply message including at least one control information pair, relating to the information, each control information pair having copy control information and a stream identifier.

ITU-T teaches the reply message including at least one control information pair, relating to the information, each control information pair having a stream identifier (figure F.7).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Eskicioglu to include: the reply message including at least one control information pair, relating to the information, each control information pair having a stream identifier.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Eskicioglu by the teachings of ITU-T, because the reply message including at least one control information pair, relating to the information, each control information pair having a stream identifier would identify the elementary stream, e.g., data files.

Eskicioglu as modified still does not teach the reply message including at least one control information pair, relating to the information, each control information pair having copy control information. He also does not teach a point of deployment module.

IS-POD-CP teaches a point of deployment module (pg. 4) and the reply message including at least one control information pair, relating to the information, each control information pair having copy control information (page 8, section 2.3.2).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Eskicioglu as modified to include: a point of deployment module and the reply message including at least one control

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information pair, relating to the information, each control information pair having copy control information.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Eskicioglu as modified by the teachings of IS-POD-CP, because a point of deployment module would allow a secure decryption method that was also transferable to other set-top boxes. Also, the reply message including at least one control information pair, relating to the information, each control information pair having copy control information would allow the POD module to inform the set-top box of the level of copy protection required.

Regarding claim 2, Eskicioglu teaches a method of copy protecting information transmitted between a deployment module and a host device (page 5, lines 21-26), the method comprising the steps of:

- Transmitting a request message for the information from the host device to the deployment module (page 8, lines 20 and 21)
- Transmitting a reply message from the deployment module to the host device (page 8, lines 24-26)
- Generating a first shared key at the host (page 9, lines 17-21) and a second shared key at the deployment module (page 8, lines 25 and 26)
- Encrypting, in the deployment module, the information (page 7, lines 15-17)
- Transmitting the encrypted information from the deployment module to the host (page 3, lines 11-13)

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- Decrypting, at the host, the encrypted information (page 10, lines 25-28); and
- Receiving the information at the host when the first and second shared keys match (page 11, lines 15-24).

Eskicioglu does not teach the reply message including at least one control information pair, relating to the information, each control information pair having copy control information and a stream identifier.

ITU-T teaches the reply message including at least one control information pair, relating to the information, each control information pair having a stream identifier (figure F.7).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Eskicioglu to include: the reply message including at least one control information pair, relating to the information, each control information pair having a stream identifier.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Eskicioglu by the teachings of ITU-T, because the reply message including at least one control information pair, relating to the information, each control information pair having a stream identifier would identify the elementary stream, e.g., data files.

Eskicoglu as modified still does not teach the reply message including at least one control information pair, relating to the information, each control information pair having copy control information.

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IS-POD-CP teaches the reply message including at least one control information pair, relating to the information, each control information pair having copy control information (page 8, section 2.3.2).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Eskicioglu as modified to include: the reply message including at least one control information pair, relating to the information, each control information pair having copy control information.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Eskicioglu as modified by the teachings of IS-POD-CP, because the reply message including at least one control information pair, relating to the information, each control information pair having copy control information would allow the POD module to inform the set-top box of the level of copy protection required.

Regarding claim 3, Eskicioglu as modified by IS-POD-CP and ITU-T teaches the deployment module is a point of deployment module (see pg. 4 of IS-POD-CP).

Regarding claims 4, 10, and 15, Eskicioglu as modified by IS-POD-CP and ITU-T teaches the host is a set-top box (see pg. 6, line 2 of Eskicioglu).

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Regarding claim 5, Eskicioglu as modified by IS-POD-CP and ITU-T further teaches the encryption means includes a hash function (see pg. 11, lines 9-12 of Eskicioglu).

Regarding claim 6, Eskicioglu as modified by IS-POD-CP and ITU-T teaches encrypted information in an elementary stream of information is encrypted with the first shared key (see page 7, lines 3-6 of Eskicioglu).

Regarding claim 7, Eskicioglu as modified by IS-POD-CP and ITU-T teaches the stream identifier that is transmitted to the host is incorporated with the Packetized Elementary Stream (PES) header of the elementary stream (see figure F.2 of ITU-T).

Regarding claim 8, Eskicioglu teaches a deployment module for use with a host device, the deployment module comprising:

- Means for communicating with the host device (page 6, lines 5-7); and
- A processor for,
 - In response to a request message for information from the host device (page 8, lines 20 and 21), generating a reply message to the host device (page 8, lines 24-26)
 - Generating a first shared key (page 8, lines 26-29)
 - Encrypting the information with the first shared key (page 7, lines 3-6)

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- And transmitting the encrypted information to the host device (page 11, lines 20-24).

Eskicioglu does not teach the reply message including at least one control information pair, each pair having copy control information and a stream identifier.

ITU-T teaches the reply message including at least one control information pair, relating to the information, each control information pair having a stream identifier (figure F.7).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Eskicioglu to include: the reply message including at least one control information pair, relating to the information, each control information pair having a stream identifier.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Eskicioglu by the teachings of ITU-T, because the reply message including at least one control information pair, relating to the information, each control information pair having a stream identifier would identify the elementary stream, e.g., data files.

Eskicioglu as modified still does not teach the reply message including at least one control information pair, relating to the information, each control information pair having copy control information.

IS-POD-CP teaches the reply message including at least one control information pair, relating to the information, each control information pair having copy control information (page 8, section 2.3.2).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Eskicioglu as modified to include: the reply message including at least one control information pair, relating to the information, each control information pair having copy control information.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Eskicioglu as modified by the teachings of IS-POD-CP, because the reply message including at least one control information pair, relating to the information, each control information pair having copy control information would allow the POD module to inform the set-top box of the level of copy protection required.

Regarding claims 9 and 14, Eskicioglu as modified by IS-POD-CP and ITU-T teaches the deployment module being a smart card (see pg. 6, line 4 of Eskicioglu). IS-POD-CP additionally teaches the module is a point of deployment module (see pg. 4 of IS-POD-CP).

Regarding claims 11 and 16, Eskicioglu as modified by IS-POD-CP and ITU-T teaches the encrypted information is transmitted to the host device using a transport stream (page 11, lines 20-24 of Eskicioglu). A transport stream is used to send, or transport, data from one place to another, particularly through noisy channels (see ITU-T, page vii).

Eskicioglu as modified does not teach the transport stream includes at least one elementary stream.

ITU-T teaches the transport stream includes at least one elementary stream (see pg. vii of ITU-T).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Eskicioglu as modified to include: the transport stream includes at least one elementary stream.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Eskicioglu as modified by the teachings of ITU-T, because the transport stream includes at least one elementary stream would allow data to be transported.

Regarding claim 13, Eskicioglu teaches a host device for use with a deployment module (page 5, lines 23-26), the host device comprising:

- Means for communicating with the deployment module (page 6, lines 5-7); and
- A processor for generating a request message for information to the deployment module (page 8, lines 20 and 21),
 - And in response, receiving a reply message from the deployment module (page 8, lines 24-26)
 - Generating a second shared key using the at least one control information pair (page 10, lines 11-15)

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- And decrypting encrypted information (page 10, line 25 – page 11, line 3), received from the deployment module, with the second shared key
- And receiving the information when the second shared key matches a first shared key generated in the deployment module (page 11, lines 15-24).

Eskicioglu does not teach the reply message including at least one control information pair, each pair having copy control information and a stream identifier.

ITU-T teaches the reply message including at least one control information pair, relating to the information, each control information pair having a stream identifier (figure F.7).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Eskicioglu to include: the reply message including at least one control information pair, relating to the information, each control information pair having a stream identifier.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Eskicioglu by the teachings of ITU-T, because the reply message including at least one control information pair, relating to the information, each control information pair having a stream identifier would identify the elementary stream, e.g., data files.

Eskicioglu as modified still does not teach the reply message including at least one control information pair, relating to the information, each control information pair having copy control information.

IS-POD-CP teaches the reply message including at least one control information pair, relating to the information, each control information pair having copy control information (page 8, section 2.3.2).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Eskicioglu as modified to include: the reply message including at least one control information pair, relating to the information, each control information pair having copy control information.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Eskicioglu as modified by the teachings of IS-POD-CP, because the reply message including at least one control information pair, relating to the information, each control information pair having copy control information would allow the POD module to inform the set-top box of the level of copy protection required.

Regarding claims 12 and 17, ITU-T and IS-POD-CP teaches respective ones of the at least one control information pairs is associated with respective ones of the at least one elementary streams. An elementary stream (e.g., video, sound, or data) is associated with control information pairs (e.g., CCI and a stream identifier), respectively, because each elementary stream requires a stream identifier (ITU-T, figure F.7) and CCI to tell the host the level of copy control needed for that particular piece of data (IS-POD-CP, page 8, section 2.3.2).

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Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

SCTE teaches of one-way and two-way networks that utilize a set-top box and a POD module for copyright protection. SCTE also discloses that the POD module can be a PCMCIA card used in computers.

Sasamoto teaches of a copyright protection apparatus that uses copy control information to determine if there is no copying allowed, a limited amount of copying allowed, or an unlimited amount of copying allowed.

CED teaches the reason for using a POD module, such as, "a removable 'module' that performs security functions related to digital set-tops".

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brandon Hoffman whose telephone number is 703-305-4662. The examiner can normally be reached on M-F 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Safet Metjahic can be reached on 703-308-1436. The fax phone numbers for the organization where this application or proceeding is assigned are 703-746-7239 for regular communications and 703-746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

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Brandon Hoffm

BH
July 30, 2003

S. h

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